

**DEPARTMENT OF ENVIRONMENTAL QUALITY
OPENCUT MINING PROGRAM**

ENVIRONMENTAL ASSESSMENT

SAMUELSON GRAVEL BORROW SITE

PROPONENT: Empire Sand & Gravel

LEGAL DESCRIPTION: NE29 & NW28, T3S, R48E

IMPLEMENTATION DATE: 6/98

COUNTY: Powder River

DATE FOR COMPLETION OF FINAL RECLAMATION: 11/1999

TYPE AND PURPOSE OF ACTION: Operator has applied for a 52.8-acre Mined Land Reclamation Contract where they plan to mine about 260,000 cubic yards of gravel from a 38-acre pit. Operator has submitted all application materials required under the Opencut Mining Act and Rules And Regulations governing that Act. Operator proposes to properly prepare, mine, and reclaim the site in an environmentally responsible manner. The proposed postmining use is rangeland.

N = not applicable or relatively insignificant or temporary impact. Y = relatively significant or long-term impact may occur.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. LOCATION, TOPOGRAPHY, AND GEOLOGIC AND EDAPHIC CHARACTERISTICS. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.	<p>Y - Location and topography. The site is located on the edges of moderately high, flat benches on the west side of the county road the runs along the west side of the wide Pumpkin Creek drainage. The site will be graded to a stable condition and blended into the surrounding topography. Because of gravel removal, the topography will be permanently altered with a graded highwalls and lower pit floors remaining.</p> <p>Geologic characteristics. The site is in the sedimentary plains portion of the state. No significant geological impacts are anticipated.</p> <p>Edaphic characteristics. Soil thickness ranges from plus or minus 0.5' to 0.9'. Overburden thickness ranges from 0.7' to 2.1'. The plan calls for salvaging all available soil and using it for site reclamation.</p>
2. SURFACE WATER AND GROUNDWATER RESOURCES INCLUDING LOCATION, QUANTITY, QUALITY, STRUCTURES, AND USES. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.	<p>N - The site is above and back from the intermittent Pumpkin Creek drainage. No groundwater is apparent within or around the mine area. Surface water and groundwater resources should not be affected by the operation. Fuel storage containers will be lined and bermed for 100% containment. Operator has committed to protecting water resources.</p>
3. AIR QUALITY. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.	<p>N - Pollutants and particulates may be produced on a temporary basis by this operation. Operators are required to comply with state air quality regulations. The site is relatively small and in a remote location.</p>

<p>4. PAST MINING DISTURBANCE, PRESENT LAND USE AND VEGETATION, PROPOSED POSTMINING LAND USE AND VEGETATION, AND WEED CONTROL. - SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.</p>	<p>N - Past mining disturbance. Minimal.</p> <p>Present land use and vegetation. The area surrounding the site is rangeland. The Montana Natural Heritage Program (MNHP) reports no element occurrences within or near the site.</p> <p>Proposed postmining land use and vegetation. The site will be reclaimed to rangeland consisting of native grasses.</p> <p>Weed control. Operator has committed to appropriate weed control measures. The county weed control board has been notified of the operation.</p>
<p>5. COMMON AQUATIC, TERRESTRIAL, AND AVIAN HABITATS AND SPECIES. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.</p>	<p>N - The site consists of basic prairie habitat common in the area.</p>
<p>6. FRAGILE, RARE, THREATENED, OR ENDANGERED HABITAT AND SPECIES. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.</p>	<p>N - None of the mentioned resources are apparent. The MNHP reports no element occurrences within or near the site.</p>
<p>7. HISTORICAL AND ARCHAEOLOGICAL SITES. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.</p>	<p>N - The site was surveyed by operator per MDOT requirements. If archeological or historical resources are found during mining and reclamation operations, operator has committed to promptly notifying the State Historic Preservation Office and routing the operation around the site of discovery for a reasonable time until salvage can be made.</p>
<p>8. AESTHETICS. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.</p>	<p>N - Any aesthetic impact will be temporary. The site is visible from a highway but the operation is relatively short term.</p>
<p>9. EFFECTS ON OTHER NATURAL RESOURCES. SPECIAL CONSIDERATIONS, POTENTIAL IMPACTS, AND MITIGATION MEASURES.</p>	<p>N - There should be no impacts on other natural resources.</p>
<p>10. OTHER ENVIRONMENTAL OR OPERATIONAL CONSIDERATIONS SUCH AS ROAD CONSTRUCTION AND RECLAMATION, MINERAL STOCKPILE DISPOSITION, WASTE DISPOSAL, BOND, AND SPECIAL COMMITMENTS.</p>	<p>N - No new haul road is needed for the operation since the site is next to the county road. All mineral will be used off site. All wastes will be properly disposed of off site. Operator has posted sufficient bond to assure reclamation.</p>

IMPACTS ON THE HUMAN POPULATION

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>11. HUMAN HEALTH AND SAFETY. Will the project add to health and safety risks in the area?</p>	<p>N - Health and safety: This project should not increase health and safety risks in the area if the operator and landowner manage the site in a responsible manner. Operator is required to comply with OSHA and MSHA regulations.</p>
<p>12. INDUSTRIAL, COMMERCIAL, AND AGRICULTURAL ACTIVITIES AND PRODUCTION. Will the project alter these activities?</p>	<p>N - Industrial, commercial, or agricultural activities in the area will not be significantly affected by the project.</p>
<p>13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT. Will the project create, move, or eliminate jobs?</p>	<p>N - The quantity or distribution of employment in the project area will not be significantly affected by the project.</p>
<p>14. LOCAL AND STATE TAX BASE AND TAX REVENUES. Will the project create or eliminate tax revenue?</p>	<p>N - Local and state tax revenues have not been significantly affected by similar operations in the state.</p>
<p>15. DEMAND FOR GOVERNMENT SERVICES. Will substantial changes in road use occur? Will other facilities and services be affected or needed?</p>	<p>N - The operator will use county and state roads to haul his product. No other government services should be significantly affected.</p>

16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS. Are federal, state, county, city, tribal, or private zoning or management plans in effect?	N - The author is not aware of any other environmental plans or goals. The local zoning authority has been contacted and clearance obtained.
17. ACCESS TO AND QUALITY OF RECREATIONAL AREAS. Will mining and reclamation activities affect the access to or quality of recreation areas?	N - Access to or the quality of recreational areas will not be affected by the project.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING. Will the project add to the area's population and require additional housing?	N - Population or housing density and distribution will not be significantly affected by the project.
19. SOCIAL STRUCTURES AND MORES. Will the project cause disruption of native or traditional lifestyles or communities?	N - The local social structure or mores will not be significantly affected by the project.
20. CULTURAL UNIQUENESS AND DIVERSITY. Will the project cause a shift in a unique quality of the area?	N - The local cultural uniqueness or diversity will not be significantly affected by the project.
21. OTHER SOCIAL AND ECONOMIC CIRCUMSTANCES.	N - Other significant social or economic circumstances are not apparent.

22. Alternatives Considered: Denial. The owner of the mineral resource would be denied full utilization of his property at this time. The operator may seek another mineral source.

23. Public Involvement, Agencies, Groups or Individuals contacted: Montana Natural Heritage Program, county weed control board, State Historic Preservation Office, and local zoning authority.

24. Other Governmental Agencies with Jurisdiction, List of Permits (that may be) Needed: Montana Department of Environmental Quality, air quality and storm water discharge permits; United States Department of Labor, safety permit; Montana Department of Labor & Industry, safety permit.

25. Magnitude and Significance of Potential Impacts: Negative impacts during mining should be insignificant and implementation of the Mining And Reclamation Plan should return this area to an aesthetically pleasing and useful condition.

26. Regulatory Impact on Private Property: The analysis conducted in response to the Private Property Assessment Act indicates no impact. The Department does not plan to deny the application or impose conditions that would restrict the use of private property.

Recommendation for Further Environmental Analysis:

EIS More Detailed EA No Further Analysis

EA completed by Mark Carlstrom, Mine Reclamation Specialist, on 9/10/98 (Y/N answers properly listed)

EA approved by Jerry Burke, Opencut Mining Program Supervisor: _____
Signature Date